

REMARKS

Claims 1-21 are pending. Claim 21 is added. Support for added claim 21 is found in paragraph [0061]. Thus, there is no new matter in claim 21. Further, the specification is amended to correct minor informalities found in paragraph [0068].

Applicants appreciate the indication of allowable subject matter in claims 3-7 and 9-19 as found on page 5 of the Office Action. However, Applicants submit that claim 1, from which the objected to claims depend, is allowable for the reasons discussed below.

In paragraph 2, on page 2 of the Office Action, claims 1, 2 and 8 were rejected under 35 U.S.C. §102(b) as being fully anticipated by JP 05-292693 to Hitachi Limited (Hitachi). The rejection is respectfully traversed.

Applicants' claim 1 calls for an insulating paper piece for electric motors, in which electrical insulation in areas where single pole coils arranged on a stator core are adjacent is heightened, the insulating paper piece comprising two slot cell portions arranged in two slots of the stator core, in which insert portions of the single pole coil are received, and two phase insulation portions, a phase insulation portion connecting a respective end of each of the two slot cell portions so as to form loops, and disposed to face against coil end portions of the single pole coil. Hitachi discloses no such thing.

Applicants' claimed invention calls for the two slot portions that are arranged in two slots of the stator core in which portions of a single pole core are received. There is no such portion in Hitachi. Hitachi has layer insulating papers 4, 5 that have cord-like connection parts 6, 6a that are made to comprise a plurality of bands. These connection parts are folded so as to have a plurality of surfaces in the direction of the width of the band so when inserted into a slot, when manufacturing the stator, they do not escape from the slot prior to inserting the coils. Further, Hitachi does not disclose which slot the respective connection parts are positioned within. In the description of Hitachi, it is noted the layer insulating papers 4, 5 cover substantially slightly

more than one-half of the inner circumference of the core and main coils (Fig. 2). Fig. 1 shows that these pieces are inserted substantially between the main coils 2a, 2b and assistant coils 3a, 3b. Fig. 2 does not show precisely where the connection parts 6, 6a are located, but there is no indication that the portions are arranged in two slots of the stator core in which portions of the single pole coil are received, for insulating between the coil and the stator core.

The sole object of the Hitachi device is to connect the layer insulating papers 4, 5.

As to the rejection of claim 2 and what is stated in the Office Action, Figs. 4-6 only deal with different forms of the connection parts, and Figs. 5 and 6 are directed to conventional types of connecting parts. The Patent Office is directed to the Japanese Patent Office website where a computerized English translation of the applied reference may be obtained.

As Hitachi does not literally disclose the subject matter of claim 1, or for that matter of claim 2, a rejection under 35 U.S.C. §102 is inappropriate. Further, as Hitachi does not suggest the subject matter of claim 1 for the reasons discussed, it cannot suggest the subject matter of claims 2 and 8 for all the reasons discussed with respect to claim 1 and for the additional features recited therein. Therefore, it is respectfully requested the rejection be withdrawn.

In paragraph 3, on page 3 of the Office Action, claims 1, 2 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Scherzinger et al., U.S. Patent No. 5,698,923 (Scherzinger) in view of Uchida et al., U.S. Patent No. 5,763,978 (Uchida). The rejection is respectfully traversed.

Claim 1 has been described above. Scherzinger et al. is directed to stator insulating bobbins that are mounted on the teeth (poles) of a stator. The bobbins are molded as insulating elements 34 which are configured in dimension to form fit and snap into place around a stator pole (col. 2, lines 45-49). Fig. 2 shows one of the pieces mounted on a tooth or stator pole 26. Each piece or insulating element 34 is shown as snap fitting or frictionally engaging the stator pole 26 (col. 2, lines 60-64). Thus, there is no possibility in Scherzinger of having two slot cell

portions arranged in two slots of the stator core in which insert portions of a single pole coil are received, nor of having two phase insulation portions, a phase insulation portion connecting a respective end of each of the two slot cell portions so as to form loops, and disposed to face against coil end portions of the single pole coil.

In fact, Scherzinger is directed to a concentrated winding type motor whereas Applicants' motor is a distributed winding motor. In the Scherzinger motor, as is obvious from their structure, it is not necessary to insulate between two phases because the coil ends do not overlap in the radial direction. The alleged two phase insulation portions 36, 38, as found in the Office Action, are in fact only to insulate the coils from the stator assembly 20 (flange portion 38) and from the flaired interface 28 (flange portion 36).

Uchida discloses slot inserts 10, called insulating members that can be used with a resin coating that has been previously applied to the stator core 60. In any case, the purpose of the inserts is to provide auxiliary insulating sections 32 that close the openings into the slots 20. As an alternative, the slot inserts of Figs. 5a-8, used with the resin coating, may be substituted by molded structures having upper and lower halves as shown in Figs. 1-4, that are mounted to the ends of the stator core to provide a lining for the stator core.

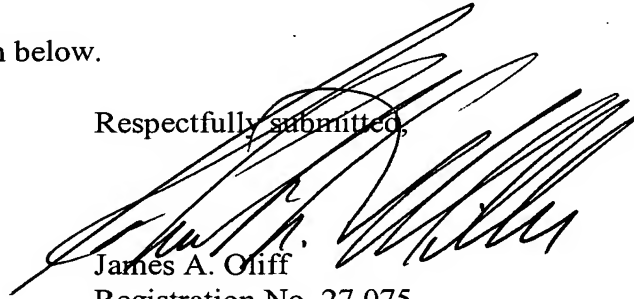
Although it might be possible to use the slot inserts 50 of Uchida's Figs. 5a-9 with the insulating elements 34 of Scherzinger, should it be determined that the stators of Scherzinger suffer the problem identified in Uchida of an unsatisfactory electrical insulation distance (col. 1, lines 55-59) then there might be some motivation for the combination. However, as Scherzinger does not appear to have any such problem, there appears to be no motivation to combine the two. In any case, the combination is not applicants' invention. Further, the insulating elements 34 of Scherzinger appear to be little different than the main insulating sections 30, 72 of the insulating member/layer of Uchida. Thus, such does not provide two slot cell portions arranged in two slots of the stator core in which insert portions of the single pole coil are received, and two phase

insulation portions, a phase insulation portion connecting a respective end of each of the two slot cell portions so as to form loops, and disposed to face against the coil end portions of the single pole coil as found in Applicants' claim 1. As such, any combination that might be made does not suggest the Applicants' claimed invention. Further, the alleged combination does not suggest the subject matter of claims 2 and 20 (claim 20 explicitly including the features of claim 1) for the reasons discussed with respect to claim 1 and for the additional features recited therein. It is therefore respectfully requested the rejection be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-21 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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